

We claim:

1. A label printer system, comprising:

a disk storage medium including a thermally-sensitive layer formed on at least a portion of an upper surface of said disk storage medium;

a rotational drive for rotating said disk storage medium;

a transverse drive including a laser head for moving a laser of said disk drive substantially transversely with respect to said disk storage medium;

a memory including a symbol set and a label printer driver; and

a processor communicating with said memory, said rotational drive, said transverse drive, and said laser, and wherein said processor uses said label printer driver to control said rotational drive and said transverse drive in order to thermally write said symbol set to said thermally-sensitive layer of said disk storage medium using said laser.

2. The system of claim 1, wherein said memory further includes a

rotational position variable that tracks a rotational position of said disk storage medium.

3. The system of claim 1, wherein said memory further includes a

transverse position variable that tracks a transverse position of said laser head.

4. The system of claim 1, wherein said memory further includes a disk

orientation variable that tracks an orientation of said disk storage medium.

5. The system of claim 1, wherein said laser head comprises a read laser and a writing laser positioned below said disk storage medium, with said writing laser being used to thermally write to said thermally-sensitive layer.

6. The system of claim 1, wherein said laser head comprises a read laser and a writing laser positioned below said disk storage medium and further comprises a label printer writing device positioned above said disk storage medium, with said label printer writing device being used to thermally write to said thermally-sensitive layer.

7. A label printing method for a disk storage medium, comprising the steps of:

loading a symbol set to a processor controlling a disk drive, with said symbol set including one or more predetermined symbols or graphics to be written to said disk storage medium;

heating with a laser a thermally-sensitive layer formed on at least a portion of an upper surface of said disk storage medium; and

manipulating said laser with respect to said disk storage medium;

wherein said symbol set controls the manipulating step in order to write said one or more predetermined symbols or graphics to said thermally-sensitive layer.

8. The method of claim 7, wherein said disk drive includes a read laser and a writing laser positioned below said disk storage medium, and further comprising the preliminary step of detecting an orientation of said disk storage medium, and wherein the heating step is performed by said writing laser and the loading, heating, and manipulating steps are performed if said disk storage medium is inverted.

9. The method of claim 7, wherein said disk drive includes a read laser and a writing laser positioned below said disk storage medium and a label printer writing device positioned above said disk storage medium, and wherein the heating step is performed by said label printer writing device.

10. The method of claim 7, further comprising the steps of:
rotating said disk storage medium;
transversely moving said laser with respect to said disk storage medium;
tracking a rotational position of said disk storage medium in a rotational
position variable; and
tracking a transverse position of said laser in a transverse position variable;
wherein said rotational position and said transverse position are used by said
processor for manipulating said laser with respect to said disk storage medium.

11. The method of claim 7, further comprising the step of reading one or
more alignment marks on said disk storage medium.

12. A label printing method for a disk storage medium, comprising the steps of:

loading a symbol set to a processor controlling a disk drive, with said symbol set including one or more predetermined symbols or graphics to be written to said disk storage medium;

reading one or more alignment marks on said disk storage medium;

heating with a laser a thermally-sensitive layer formed on at least a portion of an upper surface of said disk storage medium; and

manipulating said laser with respect to said disk storage medium;

wherein said symbol set in conjunction with said one or more alignment marks controls the manipulating step in order to write said one or more predetermined symbols or graphics to said thermally-sensitive layer.

13. The method of claim 12, wherein said one or more alignment marks are used to align a completed label according to a predetermined orientation.

14. The method of claim 12, wherein said one or more alignment marks are pre-printed on said thermally-sensitive layer.

15. The method of claim 12, wherein said one or more alignment marks were previously written to a data contents of said disk storage medium.

16. The method of claim 12, further comprising the preliminary step of printing said one or more alignment marks to said thermally-sensitive layer before the loading step.

17. The method of claim 12, further comprising the step of ejecting said disk storage medium according to a predetermined orientation using said one or more alignment marks.

18. The method of claim 12, further comprising the step of ejecting said disk storage medium according to a predetermined orientation using digital data stored on said disk storage medium.

19. The method of claim 12, wherein said laser comprises a writing laser positioned below said disk storage medium, and further comprising the preliminary step of detecting an orientation of said disk storage medium, and wherein the heating step is performed by said writing laser and the loading, heating, and manipulating steps are performed if said disk storage medium is inverted.

20. The method of claim 12, wherein said laser comprises a label printer writing device positioned above said disk storage medium, and wherein the heating step is performed by said label printer writing device.

21. The method of claim 12, further comprising the steps of:

rotating said disk storage medium;

transversely moving said laser with respect to said disk storage medium;

tracking a rotational position of said disk storage medium in a rotational

position variable; and

tracking a transverse position of said laser in a transverse position variable;

wherein said rotational position and said transverse position are used by said

processor for manipulating said laser with respect to said disk storage medium.

2025 RELEASE UNDER E.O. 14176